



**GALSON**

**Dan Bigbee  
EA Engineering  
225 Schilling Circle  
Suite 400  
Hunt Valley, MD 21031**

**August 11, 2021**

**Account# 14881**

**Login# L543336**

**Dear Dan Bigbee:**

**Enclosed are the analytical results for the samples received by our laboratory on August 05, 2021. All samples on the chain of custody were received in good condition unless otherwise noted. Any additional observations will be noted on the chain of custody.**

**Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.**

**Sincerely,**

**SGS Galson**

A handwritten signature in cursive script that reads 'Lisa Swab'.

**Lisa Swab  
Laboratory Director**

**Enclosure(s)**



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## ANALYTICAL REPORT

Account : 14881  
Login No. : L543336

### Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
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### Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at [www.sgsgalson.com](http://www.sgsgalson.com).
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

**Accreditations** SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at <http://www.sgsgalson.com> in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
New Jersey (NJDEP)	NELAC (TNI)	Lab ID: NY024	Air Analysis
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials
Texas	Texas Dept. of Licensing and Regulation	Lab ID: 1042	Mold Analysis Laboratory license

### Legend

< - Less than	mg - Milligrams	MDL - Method Detection Limit	ppb - Parts per Billion
> - Greater than	ug - Micrograms	NA - Not Applicable	ppm - Parts per Million
l - Liters	m3 - Cubic Meters	NS - Not Specified	ppbv - ppb Volume
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not Detected	ppmv - ppm Volume
ft2 - Square Feet	cm2 - Square Centimeters	in2 - Square Inches	ng - Nanograms



**GALSON**

LABORATORY ANALYSIS REPORT

6601 Kirkville Road  
East Syracuse, NY 13057  
(315) 432-5227  
FAX: (315) 437-0571  
www.sgsgalson.com

Client : EA Engineering  
Site : NS  
Project No. : ALTEN ETHANOL PLANT  
Date Sampled : 28-JUL-21 - 03-AUG-21  
Date Received : 05-AUG-21

Account No.: 14881  
Login No. : L543336  
Date Analyzed : 10-AUG-21  
Report ID : 1259379

**Ammonia**

<u>Sample ID</u>	<u>Lab ID</u>	<u>Time minutes</u>	<u>Total ug</u>	<u>Conc mg/m3</u>	<u>ppm</u>
1	L543336-1	1428	6.5	0.16	0.23
2	L543336-2	1429	9.8	0.24	0.34
3	L543336-3	1427	15	0.37	0.53
4	L543336-4	1429	9.8	0.24	0.34
5	L543336-5	1430	12	0.28	0.41
6	L543336-6	1430	8.6	0.21	0.30
1	L543336-7	1441	10	0.25	0.36
2	L543336-8	1442	11	0.27	0.39
3	L543336-9	1441	12	0.29	0.42
4	L543336-10	1440	14	0.35	0.50
5	L543336-11	1436	6.2	0.15	0.22
6	L543336-12	1435	5.3	0.13	0.18
1	L543336-13	1440	<4.7	<0.11	<0.16
2	L543336-14	1441	<4.7	<0.11	<0.16
3	L543336-15	1442	<4.7	<0.11	<0.16
4	L543336-16	1443	33	0.80	1.2

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 5.0 ug  
Analytical Method : mod. OSHA ID-188/ID-164; ISE  
Collection Media : Assay 584

Submitted by: BMS  
Date : 11-AUG-21  
Supervisor : JGC

Approved by: JGC



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6601 Kirkville Road  
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**Ammonia**

<u>Sample ID</u>	<u>Lab ID</u>	<u>Time minutes</u>	<u>Total ug</u>	<u>Conc mg/m3</u>	<u>ppm</u>
5	L543336-17	1445	8.5	0.20	0.29
6	L543336-18	1444	53	1.3	1.8
1	L543336-19	1434	36	0.87	1.3
2	L543336-20	1436	7.6	0.18	0.26
3	L543336-21	1439	11	0.26	0.37
4	L543336-22	1437	11	0.27	0.38
5	L543336-23	1437	12	0.30	0.43
6	L543336-24	1439	35	0.84	1.2
1	L543336-25	1433	10	0.24	0.35
2	L543336-26	1432	7.1	0.17	0.25
3	L543336-27	1429	7.4	0.18	0.26
4	L543336-28	1374	81	2.0	2.9
5	L543336-29	1434	25	0.61	0.87
6	L543336-30	1435	15	0.36	0.52
1	L543336-31	1461	7.8	0.19	0.27
2	L543336-32	1459	<4.7	<0.11	<0.16

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

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Level of Quantitation: 5.0 ug  
Analytical Method : mod. OSHA ID-188/ID-164; ISE  
Collection Media : Assay 584

Submitted by: BMS  
Date : 11-AUG-21  
Supervisor : JGC

Approved by: JGC

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LABORATORY ANALYSIS REPORT

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**Ammonia**

<u>Sample ID</u>	<u>Lab ID</u>	<u>Time minutes</u>	<u>Total ug</u>	<u>Conc mg/m3</u>	<u>ppm</u>
3	L543336-33	1458	<4.7	<0.11	<0.16
4	L543336-34	1456	70	1.7	2.4
5	L543336-35	1456	11	0.25	0.36
6	L543336-36	1446	27	0.64	0.92
1	L543336-37	1435	30	0.72	1.0
2	L543336-38	1433	9.2	0.22	0.32
3	L543336-39	1435	17	0.40	0.58
4	L543336-40	1435	55	1.3	1.9
5	L543336-41	1433	25	0.60	0.86
6	L543336-42	1432	28	0.68	0.98

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

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Level of Quantitation: 5.0 ug  
Analytical Method : mod. OSHA ID-188/ID-164; ISE  
Collection Media : Assay 584

Submitted by: BMS  
Date : 11-AUG-21  
Supervisor : JGC

Approved by: JGC

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**GALSON**

LABORATORY FOOTNOTE REPORT

6601 Kirkville Road  
East Syracuse, NY 13057  
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FAX: (315) 437-0571  
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Client Name : EA Engineering  
Site :  
Project No. : ALTEN ETHANOL PLANT

Date Sampled : 28-JUL-21 - 03-AUG-21 Account No.: 14881  
Date Received: 05-AUG-21 Login No. : L543336  
Date Analyzed: 10-AUG-21

L543336 (Report ID: 1259379):

SOPs: ic-assay(22)

Total ug corrected for a desorption efficiency of 106%.

L543336 (Report ID: 1259379):

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
Ammonia	+/-19.7%	98.3%



GALSON

## CHAIN OF CUSTODY

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64-69

Client Account No:  
148811Z6358040199702065  
Date: 08/05/21  
Shipper: UPS  
Initials: BGFCS Rep:  
BHONEYCUTT

Prep: UNKNOWN

Invoice To: Mr. Dan Bigbee  
Company Name: EA Engineering  
Address 1: 225 Schilling Circle  
Address 2: Suite 400  
City, State Zip: Hunt Valley, MD 20131  
Phone No.: 410-584-7000  
dbigbee@eaest.com  
Email Address: lincolnap@eaest.com☒ Samples submitted using the FreeSamplingBadges™ Program

Project: AltEn Ethanol Plant Fast-Track Air Monitoring

Sample ID	Date Sampled	Collection Medium	Sample Duration	Sample Unit	Analysis Requested	Method Reference
1	7/28/2021	Assay N584 Ammonia Badge	1428	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
2	7/28/2021	Assay N584 Ammonia Badge	1429	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
3	7/28/2021	Assay N584 Ammonia Badge	1427	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
4	7/28/2021	Assay N584 Ammonia Badge	1429	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
5	7/28/2021	Assay N584 Ammonia Badge	1430	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
6	7/28/2021	Assay N584 Ammonia Badge	1430	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
1	7/29/2021	Assay N584 Ammonia Badge	1441	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
2	7/29/2021	Assay N584 Ammonia Badge	1442	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
3	7/29/2021	Assay N584 Ammonia Badge	1441	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
4	7/29/2021	Assay N584 Ammonia Badge	1440	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
5	7/29/2021	Assay N584 Ammonia Badge	1436	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
6	7/29/2021	Assay N584 Ammonia Badge	1435	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
1	7/30/2021	Assay N584 Ammonia Badge	1440	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
2	7/30/2021	Assay N584 Ammonia Badge	1441	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
3	7/30/2021	Assay N584 Ammonia Badge	1442	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
4	7/30/2021	Assay N584 Ammonia Badge	1443	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
5	7/30/2021	Assay N584 Ammonia Badge	1445	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
6	7/30/2021	Assay N584 Ammonia Badge	1444	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE

Chain of Custody

Kent Dixon

Name and Signature

Kent Dixon

440921/1630

Date and Time

Relinquished By:

Page 7 of 8 Report Reference: 11-AUG-21 10:31

Received By:

Brett Grenert-Fischer

Brett Grenert-Fischer

8/5/21 1107

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Sample ID	Date Sampled	Collection Medium	Sample Duration	Sample Unit	Analysis Requested	Method Reference
1	7/31/2021	Assay N584 Ammonia Badge	1434	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
2	7/31/2021	Assay N584 Ammonia Badge	1436	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
3	7/31/2021	Assay N584 Ammonia Badge	1439	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
4	7/31/2021	Assay N584 Ammonia Badge	1437	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
5	7/31/2021	Assay N584 Ammonia Badge	1437	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
6	7/31/2021	Assay N584 Ammonia Badge	1439	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
1	8/1/2021	Assay N584 Ammonia Badge	1433	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
2	8/1/2021	Assay N584 Ammonia Badge	1432	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
3	8/1/2021	Assay N584 Ammonia Badge	1429	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
4	8/1/2021	Assay N584 Ammonia Badge	1374	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
5	8/1/2021	Assay N584 Ammonia Badge	1434	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
6	8/1/2021	Assay N584 Ammonia Badge	1435	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
1	8/2/2021	Assay N584 Ammonia Badge	1461	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
2	8/2/2021	Assay N584 Ammonia Badge	1459	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
3	8/2/2021	Assay N584 Ammonia Badge	1458	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
4	8/2/2021	Assay N584 Ammonia Badge	1456	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
5	8/2/2021	Assay N584 Ammonia Badge	1456	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
6	8/2/2021	Assay N584 Ammonia Badge	1446	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
1	8/3/2021	Assay N584 Ammonia Badge	1435	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
2	8/3/2021	Assay N584 Ammonia Badge	1433	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
3	8/3/2021	Assay N584 Ammonia Badge	1435	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
4	8/3/2021	Assay N584 Ammonia Badge	1435	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
5	8/3/2021	Assay N584 Ammonia Badge	1433	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE
6	8/3/2021	Assay N584 Ammonia Badge	1432	minutes	Ammonia	mod. OSHA ID-188/ID-164; ISE

Kent Dixon

Kent Dixon

4 Aug 21/1630

**Chain of Custody****Name and Signature****Date and Time**

Relinquished By:

Page 8 of 8 Report Reference: 1 Generated: 11-AUG-21 10:31

Received By:

Brett Grenert-Fischer

Brett Grenert-Fischer

8/5/21

1107